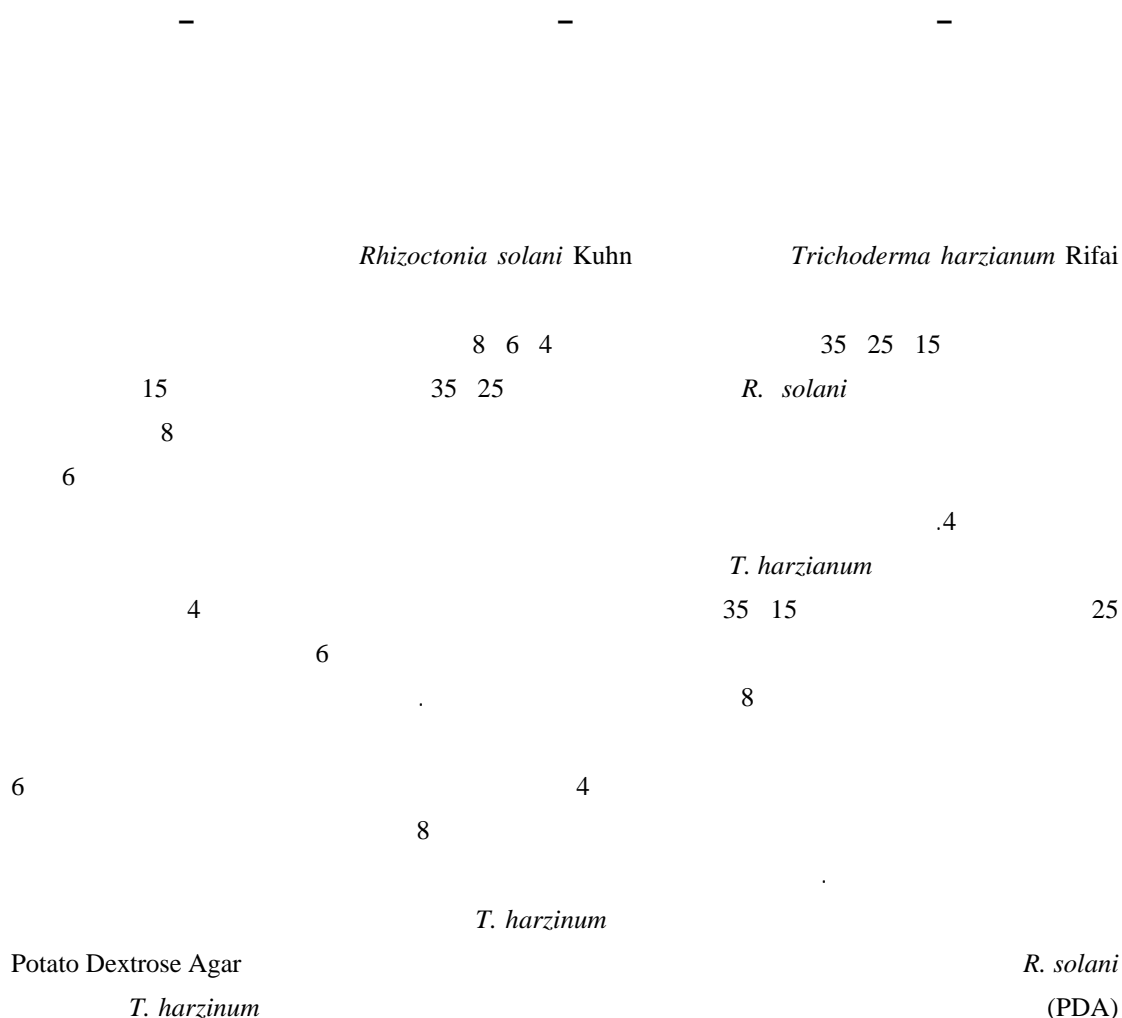


*Trichoderma harzianum* Rifai

*Rhizoctonia solani* Kuhn



**Effect of environmental condition on antagonism between *Trichoderma harzianum* Rifai and *Rhizoctonia solani* Kuhn**

**Abstract**

A series of laboratory experiments were conducted to study the effect of environmental parameters (temp. and pH) on the antagonism process between bio-control agent, *Trichoderma harzianum* Rifai and fungal pathogen, *Rhizoctonia solani* Kuhn. In particular on growth and antagonist activity of both fungi at different levels of temp. (15,25, 35 °C ) and pH (4,6,8) along 7 days. The results revealed increasing the growth of *R. solani* at 25 and 35 °C, and reduced at 15 °C through all levels of pH. In contrast, the growth of *T. harzianum* was increased significantly at 25 °C, compared with that at 15 and 35°C when using 6 and 8 pH.

Successive development of *T. harzianum* varied with different levels of Temp. and pH and that could reflected its antagonist activity, as more inhibition to the growth of fungal pathogen was obtained at pH 4 for all ranges of temp. used in this experiment in comparison with that at pH 6.

Microscopic photographs for antagonism process showed the twisting of *T. harzianum* mycelium around the mycelium of *R. solani* were coincided with collapsing and malformation of *R. solani* cell walls which possibly resulted from enzymatic secretion by bio-agent fungal eg. Chitinase and protease.

